

AMENDMENTS**In the Claims:**

Please replace claims 1, 5, and 13 with the following claims 1, 5, and 13:

5
1. A method to identify agents that bind to a BT-toxin receptor, said method comprising the steps of:

(i) contacting an agent with a BT-toxin binding receptor selected from the group consisting of

(a) a cell that has been altered to contain a nucleic acid molecule that encodes a BT-toxin receptor having the amino acid sequence of SEQ ID NO:2 and expresses said receptor;

(b) a cell that has been altered to contain a nucleic acid molecule encoding a BT-toxin receptor, wherein said nucleic acid molecule hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein said cell expresses said receptor and wherein said receptor is obtainable from an insect;

(c) a cell that has been altered to contain a nucleic acid molecule that encodes a BT-toxin receptor, wherein said nucleic acid molecule hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein said cell expresses the receptor and the receptor encoded by the nucleic acid binds to the CryIA(b) toxin;

(d) an isolated BT-toxin receptor having an amino acid sequence of SEQ ID NO:2;

(e) an isolated BT-toxin receptor that is encoded by a nucleic acid molecule that hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein said receptor is obtainable from an insect; and

(f) an isolated BT-toxin receptor encoded by a nucleic acid molecule that hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein the receptor encoded by the nucleic acid binds to the CryIA(b) toxin;

(ii) determining whether said agent binds to said BT-toxin receptor, wherein the stringent conditions comprise:

50% formamide, 0.1% bovine serum albumin, 0.1% Ficoll, 0.1% polyvinylpyrrolidone, 50 mM sodium phosphate (pH 6.5), 750 mM NaCl, and 75 mM sodium citrate at 42°C, with washes at 42°C in 0.2x SSC and 0.1% SDS;

or

50% formamide, 5x SSC, 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1% SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2x SSC and 0.1% SDS;

or

0.015M NaCl, 0.0015M sodium citrate, and 0.1% SDS at 50°C.

1-5. A method to identify agents that block the binding of a BT-toxin to a BT-toxin receptor, said method comprising the steps of:

(i) contacting an agent, in the presence and absence of a BT-toxin, to a BT-toxin binding receptor or cell expressing said receptor selected from the group consisting of:

(a) a cell that has been altered to contain a nucleic acid molecule that encodes a BT-toxin receptor having the amino acid sequence of SEQ ID NO:2 and expresses said receptor;

(b) a cell that has been altered to contain a nucleic acid molecule that encodes a BT-toxin receptor, wherein said nucleic acid molecule hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein said cell expresses said receptor and wherein said receptor is obtainable from an insect;

(c) a cell that has been altered to contain a nucleic acid molecule encoding a BT-toxin receptor, wherein said nucleic acid molecule hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein said cell expresses the receptor and the receptor encoded by the nucleic acid binds to the CryIA(b) toxin;

(d) an isolated BT-toxin receptor having an amino acid sequence of SEQ ID NO:2;

(e) an isolated BT-toxin receptor that is encoded by a nucleic acid molecule that hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein said receptor is obtainable from an insect; and

(f) an isolated BT-toxin receptor encoded by a nucleic acid molecule that hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein said receptor encoded by the nucleic acid binds to the CryIA(b) toxin;

(ii) determining whether said agent blocks the binding of said BT-toxin to said BT-toxin receptor;

wherein the stringent conditions comprise:

50% formamide, 0.1% bovine serum albumin, 0.1% Ficoll, 0.1% polyvinylpyrrolidone, 50 mM sodium phosphate (pH 6.5), 750 mM NaCl, and 75 mM sodium citrate at 42°C, with washes at 42°C in 0.2x SSC and 0.1% SDS;

or

50% formamide, 5x SSC, 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1% SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2x SSC and 0.1% SDS;

or

0.015M NaCl, 0.0015M sodium citrate, and 0.1% SDS at 50°C.

13. A method to produce a BT-toxin receptor protein, or a fragment thereof, said method comprising the steps of:

(i) culturing a cell that has been altered to contain a nucleic acid molecule that encodes a BT-toxin receptor protein, or BT-toxin binding fragment thereof, under conditions suitable for expression of said receptor protein or fragment thereof, wherein said cell has been altered to contain a nucleic acid molecule selected from the group consisting of:

(a) a nucleic acid molecule that encodes the amino acid sequence of SEQ ID NO:2;

(b) a nucleic acid molecule encoding a BT-toxin receptor, wherein said nucleic acid molecule hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, and wherein said receptor is obtainable from an insect; and

(c) a nucleic acid molecule encoding a BT-toxin receptor, wherein said nucleic acid molecule hybridizes to the polynucleotide sequence of SEQ ID NO:1 under stringent conditions, wherein the receptor encoded by the nucleic acid binds to the CryIA(b) toxin;

(ii) isolating said BT-toxin receptor protein or fragment;

wherein the stringent conditions comprise:

50% formamide, 0.1% bovine serum albumin, 0.1% Ficoll, 0.1% polyvinylpyrrolidone, 50 mM sodium phosphate (pH 6.5), 750 mM NaCl, and 75 mM sodium citrate at 42°C, with washes at 42°C in 0.2x SSC and 0.1% SDS;

or

50% formamide, 5x SSC, 50 mM sodium phosphate (pH 6.8), 0.1% sodium pyrophosphate, 5x Denhardt's solution, sonicated salmon sperm DNA (50 µg/ml), 0.1% SDS, and 10% dextran sulfate at 42°C, with washes at 42°C in 0.2x SSC and 0.1% SDS,

or

0.015M NaCl, 0.0015M sodium citrate, and 0.1% SDS at 50°C.